

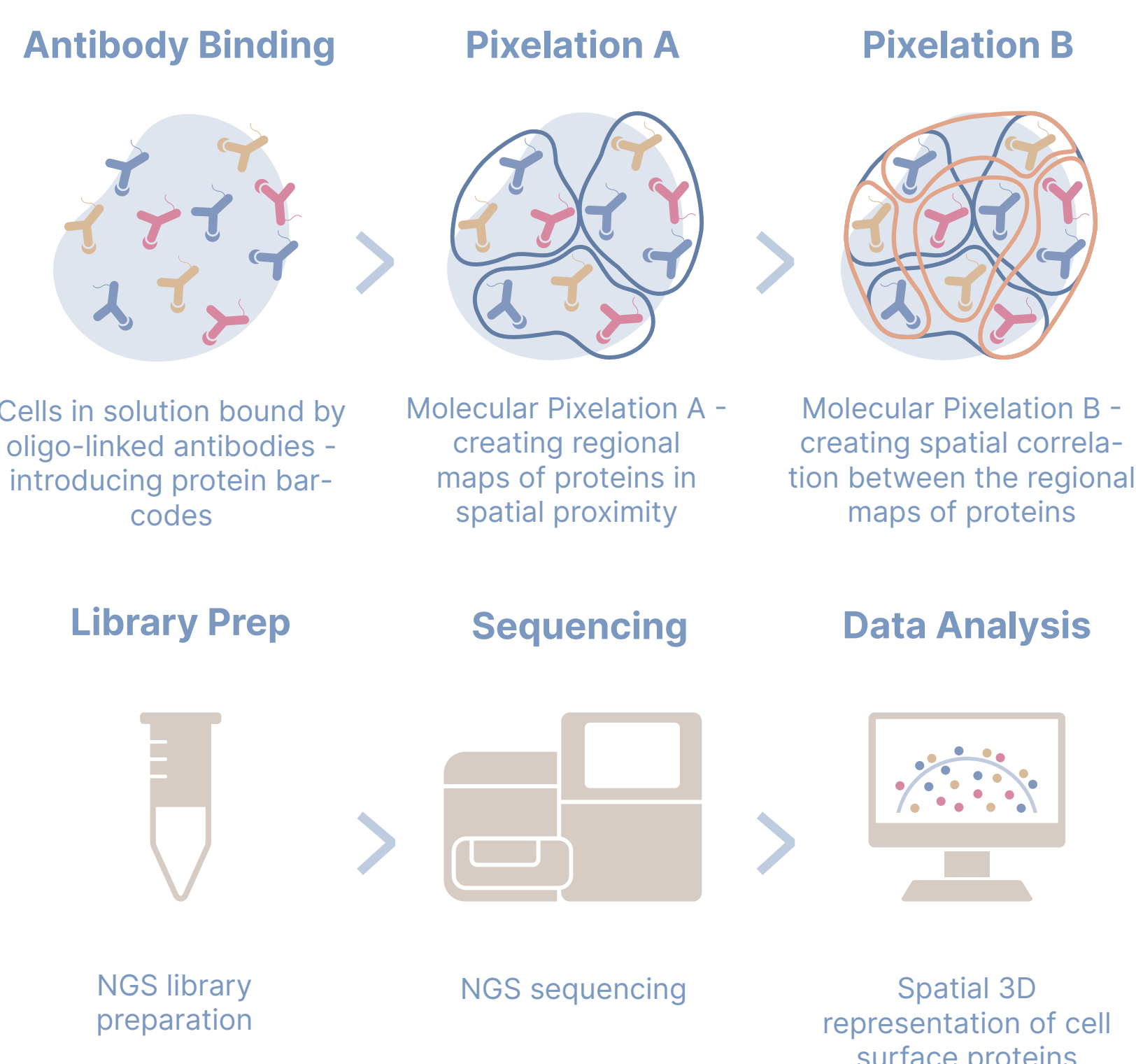
GO BEYOND WHAT YOU CAN DO TODAY - UNLOCK SPATIAL SURFACE PROTEOME

The cell surface proteome is spatially dynamic and changes with the state of the cell, which in turn determines its activity in health and disease. Understanding differential gene regulation, post-transcriptional changes and variations in protein translation alone is insufficient to fully comprehend what causes the onset of disease, progression and response to treatment.

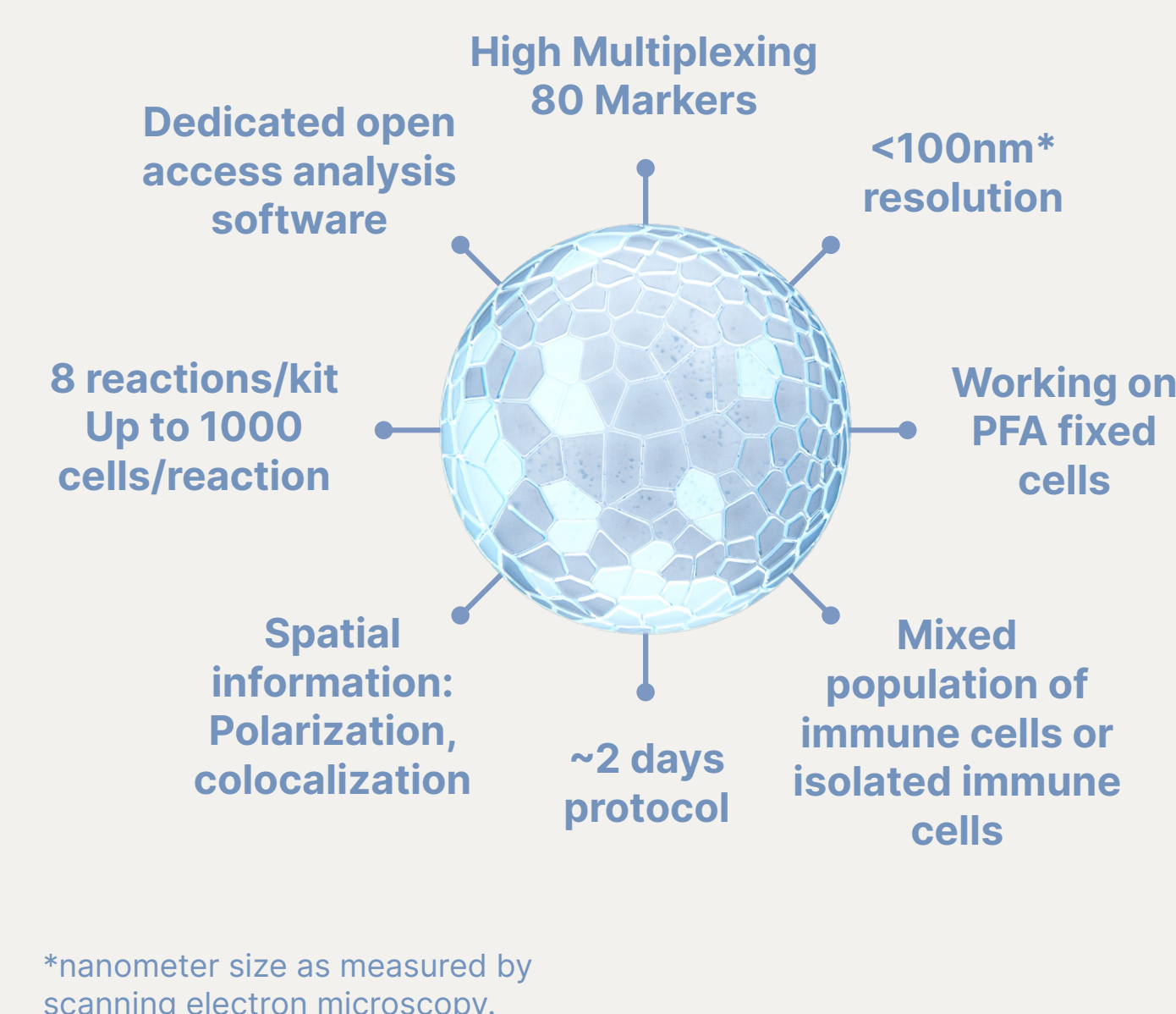
MOLECULAR PIXELATION (MPX) ENABLES YOU TO VISUALIZE CHANGES IN THE SPATIAL ARCHITECTURE OF MEMBRANE PROTEINS ON SINGLE CELLS

- Opening up for detailed analysis of vital processes of the immune system, such as cell-cell communication and mobility
- Detecting marker abundance with polarization and colocalization patterns in 3D space.

Molecular Pixelation (MPX) Workflow

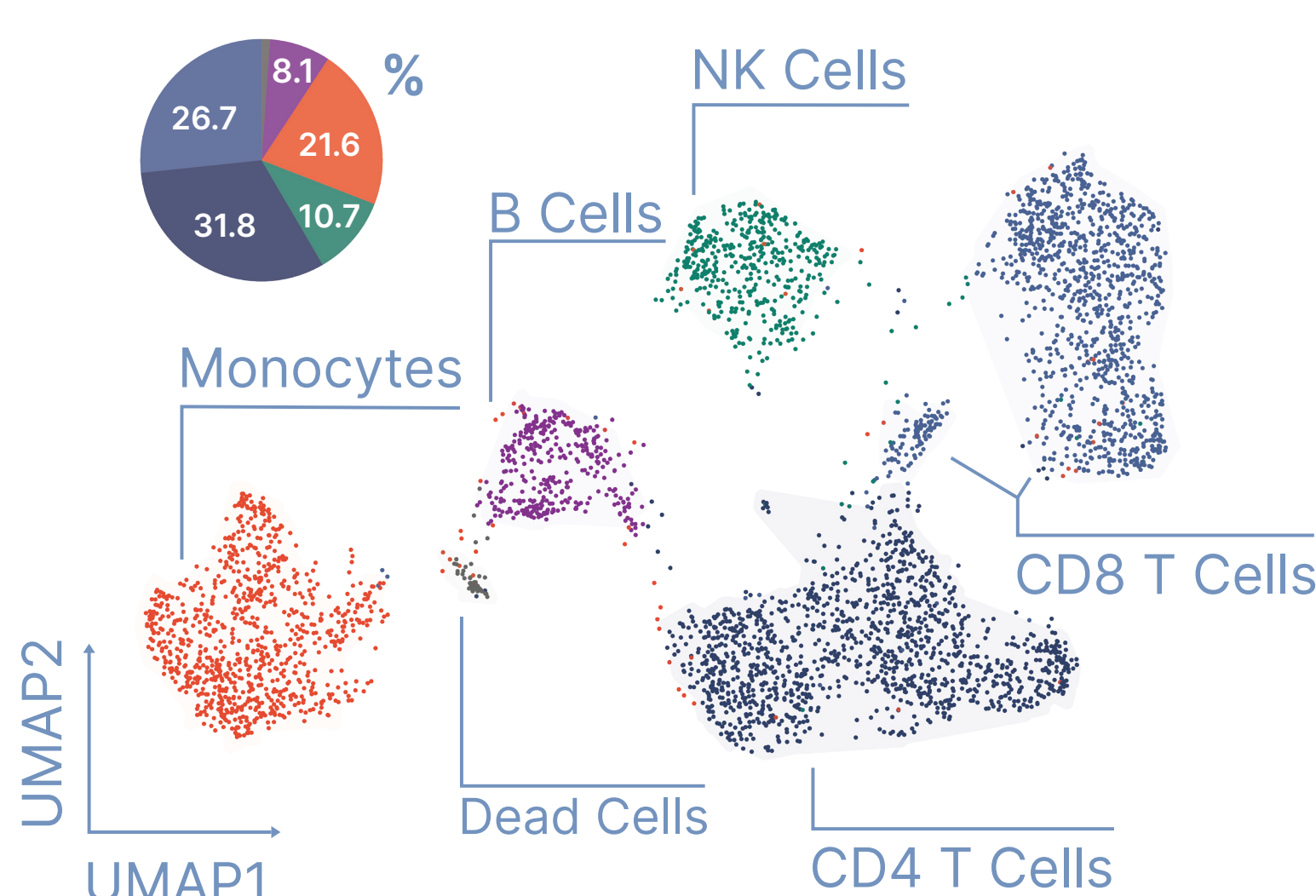


FEATURES

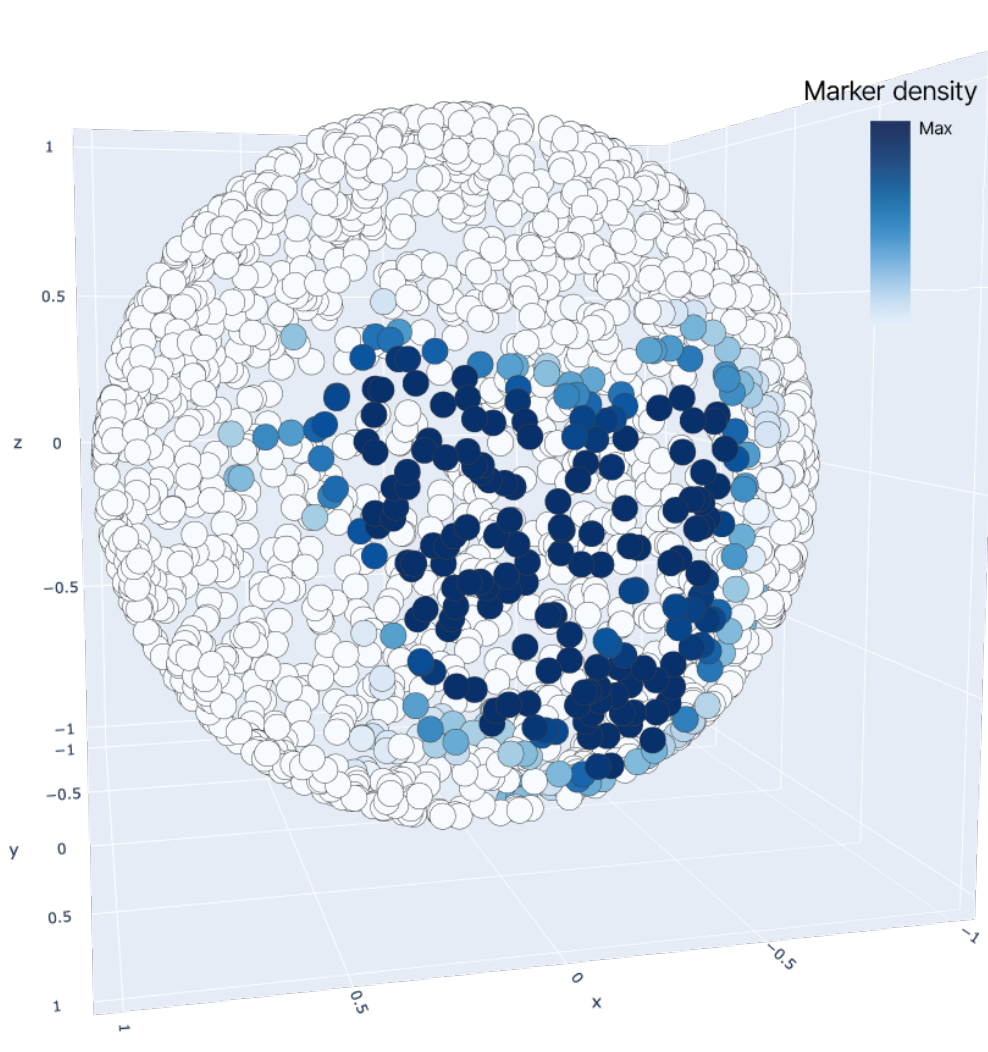


HALLMARKS OF MOLECULAR PIXELATION

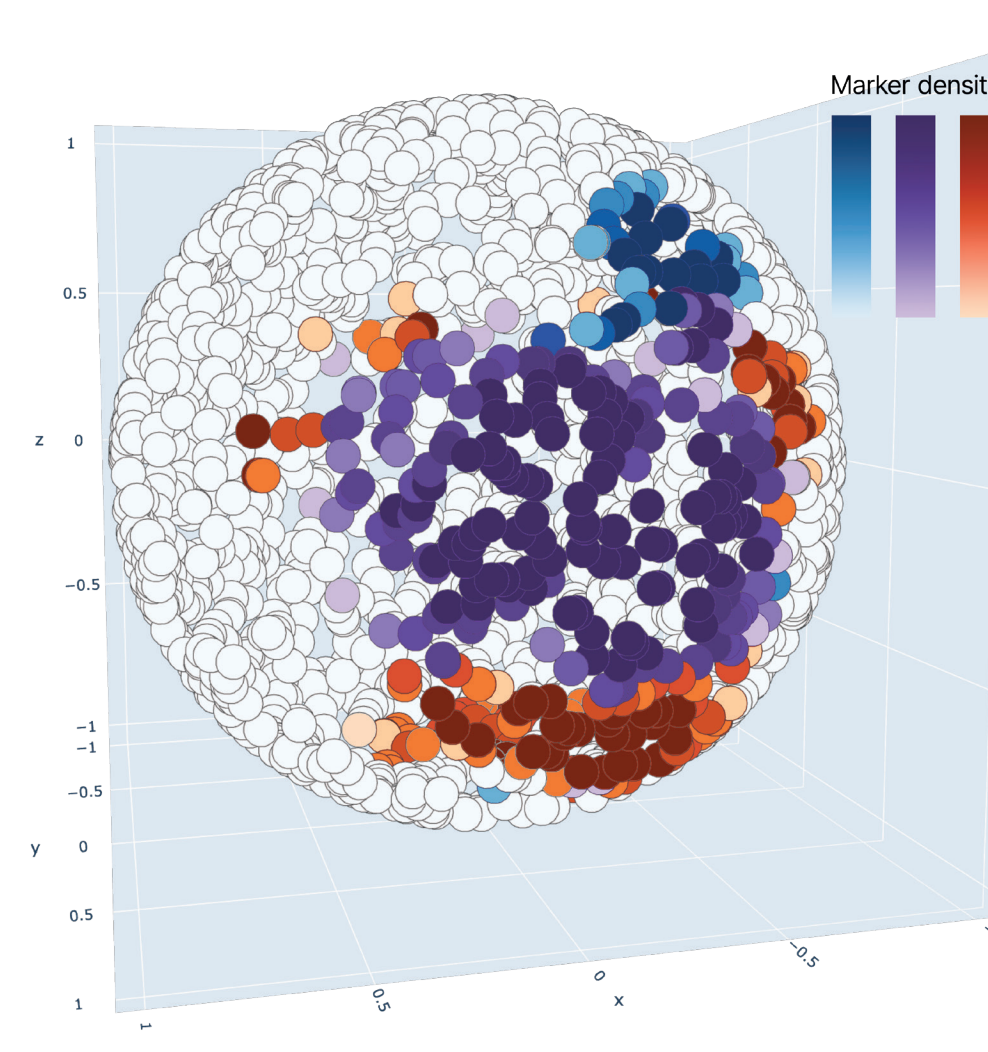
I Protein abundance and cell identification



II Polarization



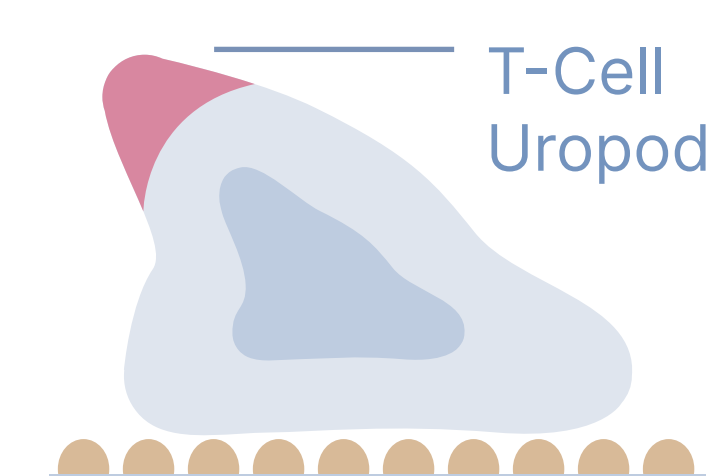
III Colocalization



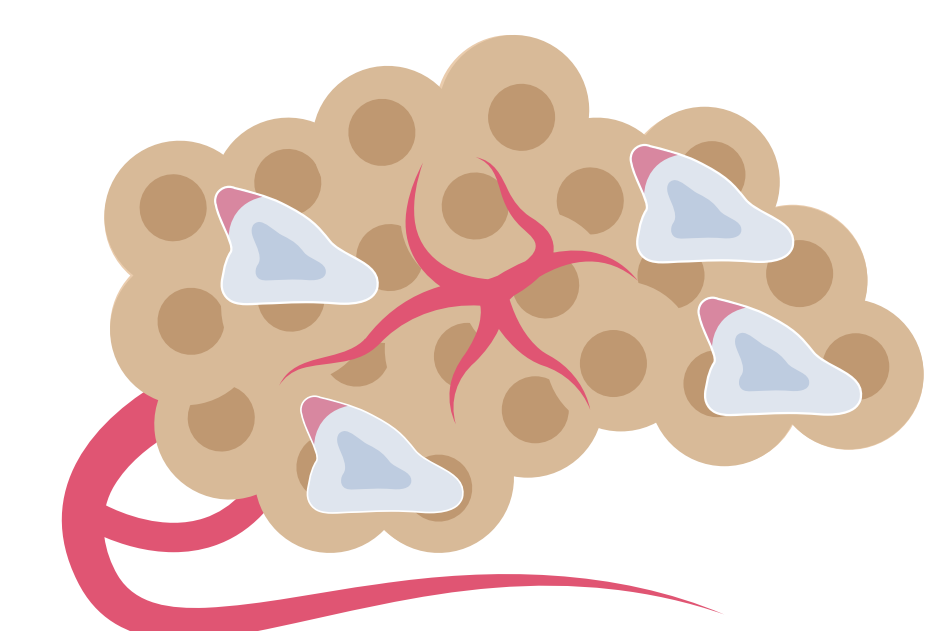
COLOCALIZATION OF PROTEIN PAIRS IN UROPODS OF CHEMOTACTIC T CELLS

Uropod formation is an essential mechanism for cytotoxic T cells to infiltrate tumors, which correlates to immune checkpoint inhibition efficacy and overall cancer survival.

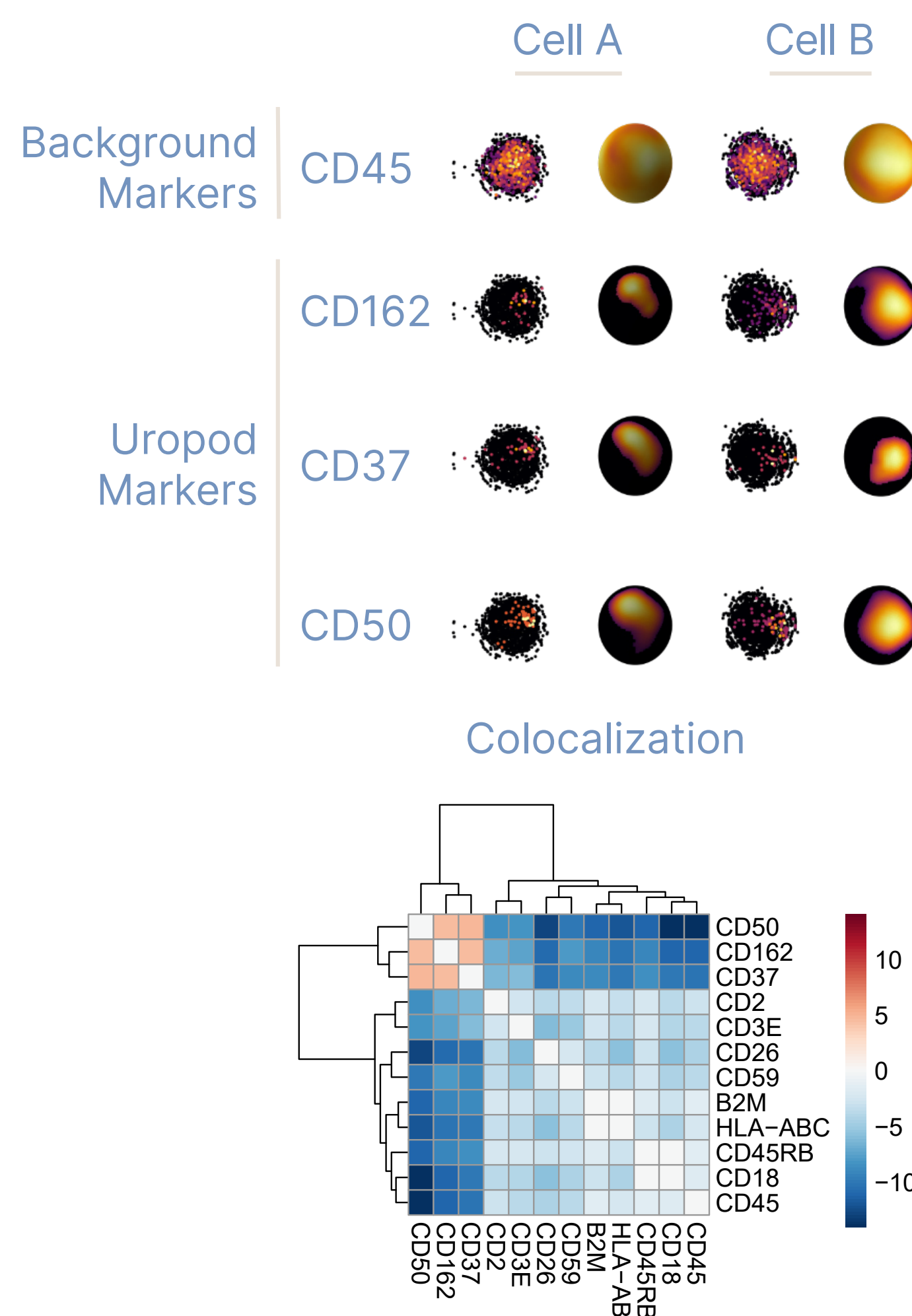
The detection of uropod formation in migrating cells has been extremely hard to study in detail before with existing technologies. With MPX this is now possible. The high multiplexing ability of the method and the graph data generated enables discovery of new colocalization patterns, or the opposite, segregation of proteins in the generated data.



Uropods are a signature of migratory T cells that are essential for them to infiltrate tumors.

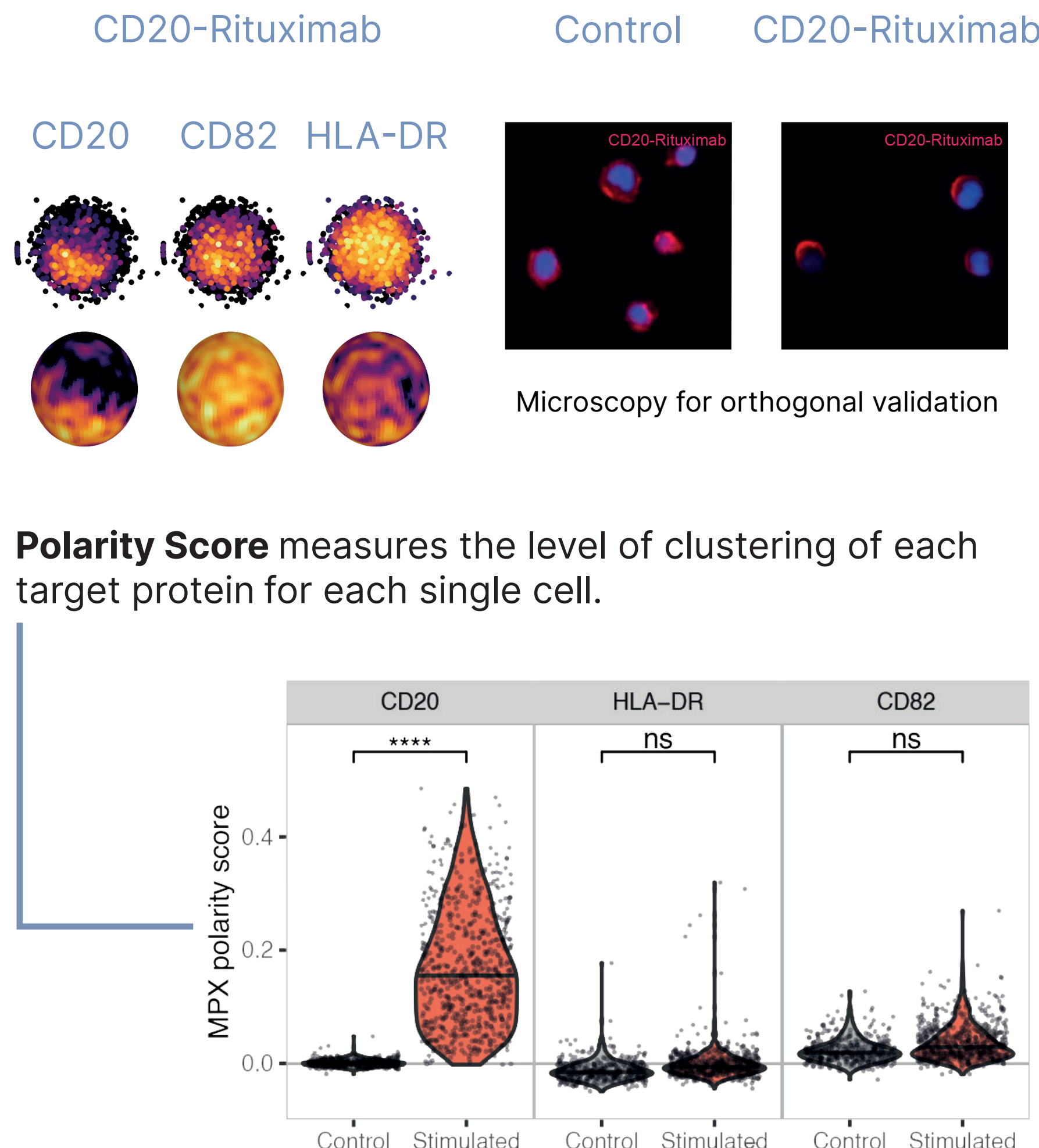


MPX was used to detect uropod formation, providing important insights into T-cell motility, which could help the development of immune therapies.



POLARIZATION OF CD20 BY RITUXIMAB

Therapeutic antibody Rituximab clusters CD20 on B lymphoma cells with represented polarity score. Orthogonal fluorescent microscopy shows the spatial distribution of the target proteins upon stimulation.



DEEP PHENOTYPING OF CELLS

HIGH MULTIPLEX, THROUGHPUT AND RESOLUTION

SINGLE CELL SPECIFICITY WITHOUT COMPARTMENTALIZATION

NO SPECIAL EQUIPMENT NEEDED

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